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A
DISCOURSE
OF
FISH
AND
FISH-PONDS.

By a Person of HONOUR.

The SECOND EDITION.

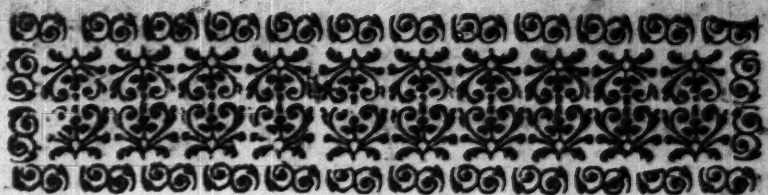


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8

Jos: Banks



Introduction.



Efore I enter upon this Subject, I must previously advertise, that I intend not to treat it in such Latitude as the Title promiseth. My concerns are in a Clay-Country, where are neither fresh Springs, nor Rivers; and Carps being the most proper Fish for the Waters of that Soil, I have made the advancing them chiefly my Care; therefore I must desire, that when I speak in general of Waters and Fish, it be remembered what I deal in; for to such I limit my Observations, tho' by the bye I may speak of

INTRODUCTION.

other Sorts ; and whenever I do, it is still with Regard to my proper Soil and Waters, and as subservient to, and as it were, grafted upon my main Design.

I wish any Gentleman, who hath employed his Money and Pains in cultivating Waters in Countries that are blessed with Springs and Rivers, would, for the Benefit of his Posterity and Neighbours, as I have done, set down his Experience, and communicate it to such as have a Mind to divert themselves with the most reasonable Employment of beautifying and improving their own Estates. Perhaps these two collated, might give a compleat Idea of the whole Affair of Fish, which would not only encourage any Lover, but conduct him thro' the difficult Avenues, such as lead to most Improvements, and particularly this of profiting by fresh Water Fish.

INTRODUCTION.

I believe, that the Breed and Feed of Fish, admits as much Variety, as that of Cattel, which is scarce the same in any two Farms, and every Country-man expects his Advantage from his own Experience; therefore, if wise, is loath to transplant. Possibly Fish may not be the same in several Countries, tho' the Water and Soil is alike in all Appearance; but yet the two great Distinctions, are Clay and Sand, or standing Water and Springs with perpetual Current; and he that hath a Notion of the Success in these, may launch in any Country of England, and expect to be rewarded for his Pains, tho' the particular Experience of the Place must, after all, give a Perfection to his Skill.

What I have done, is the Result of good Manners, which are always concerned in giving full Complaisance to my best Friends: And I must not oppose my weak Capacity to their Importunity, who have obliged me to put my Experience

INTRODUCTION.

ence in these Matters in Writing, flattering me with an Opinion, that not only my own, but their Posterity, may profit by it. I am sure that I intend both; and therefore assure my self, if Good-will have any Virtue or Authority, it must atone for all Failings in the Performance, which I know are many.

Sept. 14.
1713.



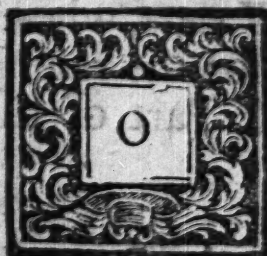


A
DISCOURSE
OF
FISH, and FISH-PONDS.



C H A P. I.

*Of the Situation and Disposition of
the principal WATERS.*



N E great Point in the
Conduct of Fish, is, to
havethem at Command;
another is, to have per-
petual Recruits, to
supply your Stock as you draw it off.
This is not to be done without a cer-
tain,

tain Order and Method; and with it, nothing is more practicable and easy.

Your Method must be, to have some great Waters which are the Head-Quarters of the Fish, from whence you may take, or wherein you may put any ordinary Quantity of Fish. Then to have Stews, and other proper auxiliary Waters, so as you lead the Fish from one to the other, whereby you never shall want, and need not abound; and which is more, lose no Time in the Growth of the Fish, but employ the Water, as you do your Land, to the best Advantage.

This will appear more distinctly in the Sequel of this Discourse, which shall begin with the Situation and Disposition of the principal Waters, whereupon you must depend for the raising and feeding the greatest Part of the Stock.

First, you must examine the Grounds, and find some Fall betwixt two Hills,
as

Of Fish and Fish-Ponds. 3

as near a Flat as may be, so as there be a sufficient Current for the Water. If there be any Difficulty in judging of such, take an Opportunity after some sudden Rain, or the breaking up of a great Snow in Winter, and you shall see plainly which way the Ground casts; for the Water will take the true Fall, and run accordingly.

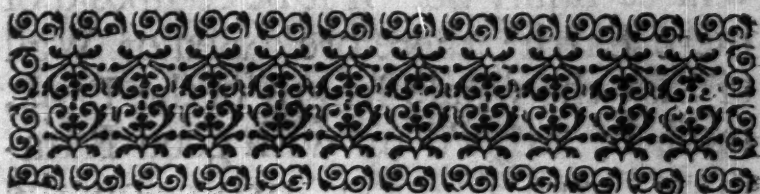
The Condition of the Place must determine the Quantity of Ground to be cover'd with Water. I should propose in all 15 Acres in three Ponds, or 8 Acres in two, and not less. And these Ponds should be plac'd one above another, so as the Point of the Lower, may almost reach the Head or Bank of the Upper; which will be very beautiful, as well as profitable, as will appear afterwards.

The Head or Bank, which by stopping the Water in its Current is to raise the Water, and so make a Pond; must be built with the Clay and Earth taken from the Pan or Hollow, dug in

the lowest Ground above the Bank ;
and that Pan should be shap'd as half
an Oval, whereof the Flat comes to
the Bank, and the longer Diameter
runs square from it.

But were there not need of Earth
for this Purpose, it were better to leave
the natural Soil for the Fish to feed
upon. I shall give the Reason after-
wards, and consider the Manner of
Raising and Fortifying the Bank par-
ticularly.





C H A P. II.

Of the Manner of making and raising
POND-HEADS.



IT is obvious, that if you make a Dam cross a Valley or Swamp, where at any time after the Water runs, it will produce a Pond; and as the Bank or Dam is higher at the Point or Center, which is against the lowest Ground, so much is the Pond deeper; and if the Hills on each side rise steep and quick, the Water stopt will cover less Ground, than if they rise slow.

Now first, for making the Bank or Head, you must be sure it is tight and that it do not sew or leak, as it

B. 3

will

will certainly do, if it be compos'd of mere Earth; therefore a Bed or Wall of Clay the whole length of the Bank, must be carry'd up with good Ramming, from a Foot or two below the Surface of the Ground, to such Height as you propose the Water shall stand.

If you do not give the Bed of Clay this Foundation, the Water lying under a great Weight from the Depth of it, will work it self underneath; so allow a Spit or two at least for it. Then, as you ram the Clay, you must be sure that Earth be brought to carry the Bank up with it, else the Sun will sear and crack it, which is of pernicious Consequence; so when it is come to its full Height, close and cover it with Earth immediately, least that Inconvenience happens.

You must allow three Foot to the Breadth of this Bed of Clay, and raise it to the Height you intend the Water shall stand, and lay Earth three Foot higher, two Foot would have serv'd

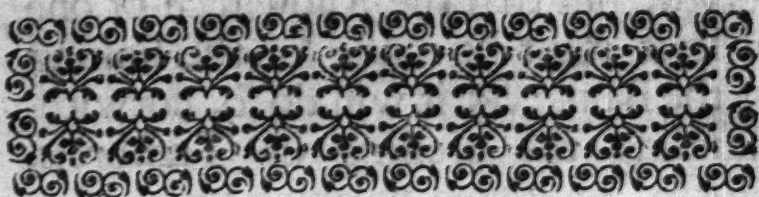
Of Fish and Fish-Ponds.

7

serv'd, but that the Allowance of one at least must be made for the sinking of the Bank ; for it will do so, notwithstanding the pressing of Tumbrels, Horses, and Men working upon it.

If you project many Stews, or other Ponds to be sunk right down about the same Time, you will have great Advantage by the Clay you take out of them, which will be much more than is necessary for the Bed, and that may fortify the Bed, by being press'd down by the Tumbrels on each Side of it ; and so the Bank will be very much confirm'd, and it will also save breaking of Ground within the Pond, which is a great Advantage in the Feed of the Fish.





C H A P. III.

Of the Dimensions of POND-HEADS.

THE Dimensions of these Banks, are govern'd by the Manner of the Hills rising ; for if it be quick, then to cover a competent quantity of Ground, you must raise the Bank higher, and consequently it must be made stronger, than when the Ground riseth Slow, so as a moderate Height shall cast the Water upon Ground enough : And of this there will be great Difference ; for in some Places 10 Foot high shall cover as much as 20 Foot in others. And this will be easily discover'd by the Water-Level us'd according to Art, whereby you

you may stake the Water-Line upon the Ground to any Height ; and so you will fix the determinate Height of the Bank.

I will suppose a Medium, and that a Bank 14 Foot high at the Center, will cover the Quantity of Ground. Then you must make your Bank at the Foot at least 50 Foot wide, and so straightening by equal Degrees on either Side, bring it to 16 at the Top ; and so you will have a sufficient Slope, and the Bank will stand firm and durable, scarce to be destroy'd without as much Pains and Industry as made it.

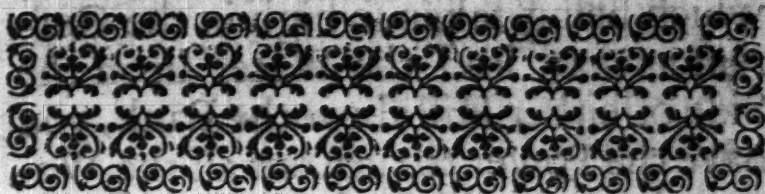
By this Proportion Pond-heads of any Dimension may be projected ; the Matter is not so nicely circumstanc'd, that a little more or less should signify. But it must be noted, that to make them too-slight, is the greater Error, and most to be avoided ; let them be rather made too-strong, for then you have not only a more secure Bank, but

a more beautiful Walk, and more Room for Wheel-Carriage, besides a Capacity of some Wood; all which compensate the Charge of what is superfluous.



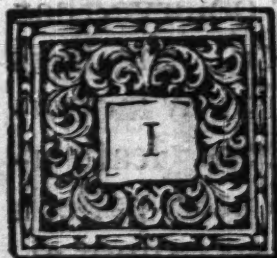
By this Proposal, and heads of any Dimension may be projected; the Matter is not so nicely circumstanced, that a little more or less should signify. But it must be noted, that to make them too light, is the greater Error, and most to be avoided; let them be made too strong, for then you have not only a more secure Bank, but

CHAP.



C H A P. IV.

Of securing the Banks.



IF the Bank be well made, and in sufficient Dimension, nothing can hurt it, but great Land-Floods, or Water-Shots; which, if suffer'd to run over the Bank, will not only carry away the Fish, which in a warm Flood will rise and go with it to seek Adventures; but also make gurry Holes in the Back of the Bank, and weaken it so much, that if the Flood continues, it shall carry all away together.

For preventing of this Mischief, there are two ways: 1. Grates at each End of the Bank, planted upon the Level that is to be the highest of the Water

Water. 2. Channels of Diverfion, which being taken fo high in the Current as may lead the Water upon the Side of either Hill above the Bank, you have the Power to turn out all the Water when you please, fo that none fhall come upon the Bank.

1. As to Grates, the Way of them is well known ; however obferve, that if they be made of Wood, the Bars muft be fet Diagonally, like Window-Bars ; for fo Rubbifh ftops leaft againft them, and the Water paffeth freer. And in Regard you cannot allow any great diftance between them for keeping in the Fish, you muft help out the Room by extending the Grate from each fide of the Cut in the Bank where the Water is to vent, fome confiderable Space from the Bank, and there to meet in a Point, forming a Triangle upon the Bank. Here are many more Slits for the Water to vent at, than if the Grate lay flat upon the Bank, covering the Passage only. And if need be, there may be Doors to flide
up

up and down made in the Grate, to let the Water pass more freely; but this endangereth losing the Fish. If you will afford Iron for these Grates, you need only cover the Passage of the Bank; for the Bars need not be so thick, but there will be Spaces enough for the Water to vent at.

2. The Channels for diverting the Water, are very useful in this and many other Respects; for they give you a perfect Command of the Water, and you may turn it which Way you please, so as to fill or keep dry any of the Ponds, and in a wet Season are a perfect Security. These should be made four foot wide, and on each Side of the Ponds the loss of Ground is not considerable; for Wood growing there, will make Amends for it.

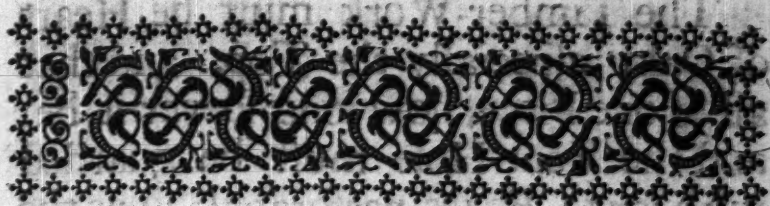
The String of Ponds in *Hide-Park* are admirably dispos'd in this Respect; for the Current of the Valley is carry'd along by the Side of all the Ponds, and may be let into any of them, or any
may

may be Empty'd into it ; than which,
there is not a greater Command of
Water.

However carefully a Bank is made,
it is probable it will Sew a little at first;
but this should be no Discouragement;
for by the settling of the Earth, it will
continually grow lighter, and in a few
Years, if made with tolerable Care,
be as firm as a Rock.



CHAP.



C H A P. V.

Of SLUCES.



THESE are very requisite to the good Command of a Water, and though very ordinarily us'd, yet require an experienc'd Carpenter to make and fix them as should be especially in great Waters; and such as have not Experience, shall Err most grossly in this Work. They must be fram'd so as to stand firm, that the Force of any Thrust, or a Boat's running against them, may do no Prejudice to them: For if they are any thing strain'd, they are apt to prove Leaky; and in so great an Height as is needful for deep Waters, a small Matter will do it, unless they are extraordinarily well Abutted. The

The Timber-Work must be Heart of Oak, especially the Top, and that all of one Piece, how long soever it be; and the Vent-Hole must be guarded with large Boxes perforated; so as the Water, but no Fish, may pass. And all this well fram'd, and what is under Ground extraordinarily ramm'd with Clay, else it will be apt to leak.

The Use of these is very great; for if a great Water must be Empty'd, you must either apply Engines, cut the Bank, or draw a Sluce. As for Engines they are too chargeable, and puzzling to fix; however, I may propose to them that are Lovers of Art, some facile Ways of lifting great Quantities of Water. Then, if you cut the Bank, the Passage is interrupted, and made troublesome by the Earth, and you shall scarce ram it up so well again, but it will perpetually leak about the Place where the Fisure was; but Sluces vent the Water certainly though slowly, without any Labour, Charge, or Inconvenience.

CHAP.



C H A P. VI.

Of the Manner of working to raise a
POND-HEAD.



OW, as for the Manner of raising this Bank, which I think is the only chargeable Work you have, I shall give some Light into the Way of Working, so as to abridge the Expence as much as may be. The Advantage of Trades, is, that by continual Experience, they find neerer Ways of doing things, spending fewer Strokes, and less time, than others can. And in the Conduct of this Work, there is much to be fav'd; every Man's Reason leads him to contrive Compendiums of Business, as I have done in the Disposition

position of my Waters ; which Experience of mine may save others the Thought as well as Loss by making their own Experiments

When you have projected your Work, for which the latter End of *June*, or the Beginning of *July*, is the best Time, take the Assistance of your Neighbours, and provide your self with Six Tumbrels, Four good Horses, and two stout Labourers, besides the Driver to each Pair of Tumbrels. I call them Pairs, because they work alternately with the same Horses ; so that one is Filling, while the other is Moving, and your Labourers, as well as Horses, are always at Work.

The first Work to be done, is the taking up the first Spit of Earth where the Bank is to be, and from the Pan of the Pond, and to lay it by for the Uses I shall declare hereafter.

Then lay down your Sluce, with Trunks sufficient to convey the Water through

through the Head or Bank. This must be done at the deepest Part of the Ground, which probably will fall in the Center of the Bank. This will employ two Pair of Tumbrels, and four Labourers for digging and fetching of Clay, besides four Labourers to ram it, which must be, as was said, very well done. And the Carpenter, who before-hand hath fitted his Work, must attend also one whole Day to help in the laying it down, and to see it well ram'd.

The next Day's Work may be the Employment of two Pair of Tumbrels in fetching of Clay, and four or five good Labourers to ram the Foundation of the Bed of Clay. And I suppose this may rise a Foot in one whole Day's Work, more or less, as the Length of the Head is. Clay riseth stiff, and for that if it riseth near, as in the Pan of the Pond, three Labourers to a Pair of Tumbrels, are requisite to dig and fill, otherwise the Horses will be idle, and want Work, as well as the Rammers.

The

The Day after Employ four Pair of Tumbrels more, to fetch Earth out of the Pan of the Pond, to lay along the Bank on each Side of the Bed of Clay the whole Length of the Head; and to this Work, two Labourers for a Pair of Tumbrels are enough.

Here you must lay on six Labourers at least, to ram the Bed of Clay, and spread Earth upon the Bank, so that it may be done as fast as the six Tumbrels supply it; and by this Means the Bank and Bed of Clay will rise together.

Thus you proceed 'till the Bank is finished, which will rise faster as you come nearer the Top, and so will somewhat alter the Employment of the Tumbrels and Men, which you must conform in Proportion accordingly. And observing these Directions, you may make two Ponds in one Month, (supposing the Weather propitious) which shall be three, four, or five Acres apiece, as the Ground gives, and
not

not expend in Money above 80*l.* altho' you pay for every Hour's Work of Man and Horfe.

But confidering that a Gentleman is fuppos'd to intend this Bufinefs, not only as a Care, but an Entertainment, he will not fuffer his own Servants and Horfes to be without a Share of it; and then I cannot imagine which way he can expend above 60 *l.* fupposing Labourers Work for 12*d.* per Day, which I cannot fay they will do in all Countries.

The third Pond may be a Work of another Year; and if the Ground lies fair for it, that is, much upon a Level, I would not be without it; for it will add much to the Ornament of your Eftate, becaufe it will fill up a Range or String of Waters, which two doth not; and befides contribute vastly to the Increase of Fish, as I fhall fhew; and I prefs this Thing the rather, becaufe without it, in the Method I propofe, you will have the Ufe of but one Pond as
to

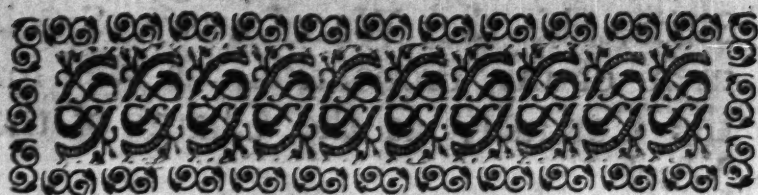
to Water every Year. Nay, were not Oeconomy, and saving Charge one great Branch of my Design, I should recommend more of these Waters, if the Place will receive them.

And to demonstrate the Charge is not so very great, compar'd with the other Expences Gentlemen are at for their Diversion without any Return of Profit, as to deter any from undertaking this particular Work; I must remember, that once (at the Command of my Lord *North*, I did, as I have directed) proceed to the making one great Pond and one Stew at *Catledg*, which are still to be seen, but neglected: And besides, the Regard to Profit by the Fish they would maintain and supply, the very Ornament of them was worth the Charge. I was limited to 10 £ . besides the Work of his Lordship's Horses, which I compute to be 4 £ . more; so the whole did not cost 15 £ . and yet a full Acre of Ground lay under-Water, and all was compleated in 12 Days. His Lordship would

would not allow the laying down a
Sluce, else that Water was a Specimen
of my Proposition, as well for
the Conduct, as the Charge of the
Work.



CHAP.



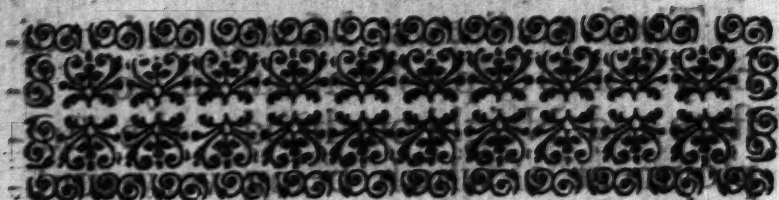
C H A P. VII.

Of Auxiliary W A T E R S.

AS a great Garrison must have many subservient Forts and Redoubts dispers'd about the Place, for securing the Country, and collecting the Contributions, which are to maintain the Head-Quarters; so the great Ponds, which are the Head-Quarters of the Fish, must be accommodated with many other subservient Waters, which I call Auxiliary, because they serve to relieve the greater when over-stock'd, and to supply them when under-stock'd, and to rear up and maintain Fry and young Stores, as well as to render the Fish easy to be taken; without which Conveniences, you will have but a sorry Account of the Fish. There

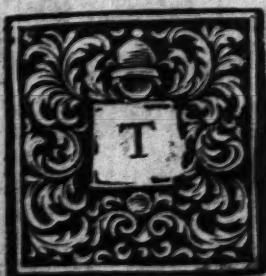
These are Stews, Moats, and ordinary Ponds dispers'd about in your Estate and Neighbour-hood; the Employment of which being very considerable in the well ordering of Fish, I will consider each apart; and first, of Stews.





C H A P. VIII.

Of STEWS.



THE peculiar Use of these, is, to maintain Fish for the daily Use of your House and Friends, whereby you may with little Trouble, and at any Time, take out all, or any Fish they contain; therefore it is good to place them in some inclos'd Grounds, near the chief Mansion-House. Some Recess in a Garden is very proper, because the Fish are fenc'd from Robbers, and your Journey to them is short and easy, and your Eye will be often upon them, which will conduce to their being well kept, and they will be an Ornament to the Walks.

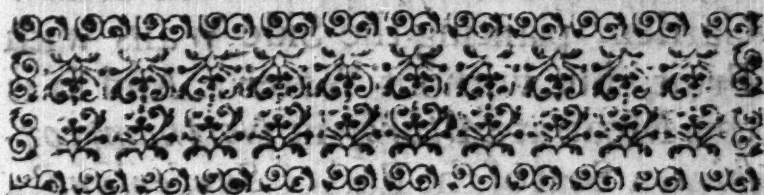
If you have two great Waters of three or four Acres apiece, I do advise, that you be not without Four Stews, of two Rod wide, and three Rod long apiece. The way of making these, is, by cutting the Sides down somewhat sloping, and carrying the Bottom in a perpetual Decline from End to End, so as you may have a convenient Mouth, such as Horse-Ponds usually have, for taking out your Nets when you draw for Fish.

If you have Ground enough, it is better to make a Mouth at both Ends, and the deepest Part in the Middle; for so you may draw your Nets backwards and forwards, losing less Time, and the Fish will not have such Shelter, as the Depth under a Head will be. Besides this, you will find the Fish will delight themselves in coming upon the Shoals, and it may be, thrive better. But for this Manner you must allow at least a Rod of Ground in Length more than for the other.

These I intend for *Carps* chiefly, though not absolutely; and if you find the *Tench* and *Perch* increase and prosper, you may make other lesser Stews to accommodate them apart, if you please; and so you will have them at Command, without disturbing the other Fish; only observe this by the Way, that *Perch* will scarce live in Stews and small Waters, if the Weather be hot, but will pine, grow lean and thin, if not die; therefore the Stews are to be their Winter-Quarters, from whence you take them for the Use of your Table, but in Summer translate them to the greater Ponds.

These Stews being design'd at the same Time you raise the Pond-Heads, will be done almost under the same Charge, as is hinted elsewhere: And once made, you have the Fish at a Minute's Warning ready for the Kettle, or any other Use; which Convenience is the great End of all the Charge and Pains, and without it you are not a Master of Fish.

CHAP.



C H A P. IX.

Of M O A T S.

THESE were made ordinarily for securing of Dwelling-Houses, rather than for Fish; and since Wars have been less frequent, or rather grown so much an Art, that the ancient Way of Fortifying is not useful, are almost disus'd. For being laid so near the Dwelling, as we observe commonly they are; for want of Sun, and Air to purge them, the Water grows putrid and slimy, yielding no pleasant Scent to the House; besides, when laid dry, as is necessary sometimes, the Stench and Filth of them is insupportable; and therefore many Gentlemen have either slighted them wholly, or present-

ed the Form only, as a Walk or low Garden, planting the Side-Walls with Fruit, but without Water: And so is the Moat at *Althrop* in *Northamptonshire*, a Seat of the Earl of *Sunderland's*, much of late beautify'd, put in Order, and from a Defect, turn'd to a great Perfection.

But I am an Advocate for Moats, order'd as they might be, and do esteem them a very great Accomplishment to a Seat, in many Respects. 1. Tho' they are not a Fortification for Resistance in Time of War, yet against Pilferers and Tumults, they are sufficient and better than any Walls you shall make. 2. They shall nourish a World of Fish, which, tho' not so well at Command as in other Waters, yet for Angling, and the sporting Part of Net-Fishing, are better than the others are, because nearer, and fish'd with smaller Nets. 3. They are an Ornament and Delight to a Seat beyond Imagination, as will appear when I have shew'd how I would.

would have them made; and of that next.

They should encompass not only the House, but all the Out-houses, Yards, Orchats, and it may be a Pigh-tle or two, such as are neat for ordinary convenience of Horses, or a Cow or two: I say, all that is call'd the Home-stall, should be environ'd by the Moat. It should be no less than 40 Yards, or 100 Foot over, cut down with a Slope on each Side, as your Pond-Heads were, without Walls; which are too great a Charge to keep in Repair. And towards the Pastures, you may make a Mouth; if it runs the whole Length of one Side of your Moat, it is the better, and Fish will increase and thrive from it. Let there be but two Avenues with Bridges. And to prevent the Charge of crossing so great a Length with Bridge-Work, you may leave the Earth on each Side broad enough for Carriages, but not to meet by 10 or 12 Foot, which may be cover'd by a Bridge, and under-

C 4

neath,

neath, the Water to Communicate; so the Pass shall be, as upon a Causeway, with a Draw-Bridge; for so it may be made if you please.

I know all Situations and Soils will not admit of this; for some are low and Marshy, and so have naturally too much Water; others are upon hanging Ground, which, for want of a Level, cannot be Moated in this Manner; others are Sandy, and will not hold Water: But the happiest of all, is such a Situation as either hath Springs, or will take a Current, and discharge it again by a Sluce or Gates, so that the Moat shall be perpetually fed with a fresh Water, and may at any time be laid Dry; therefore in these Affairs there must be a previous Judgement of the Place, else Undertakings will not succeed, and that is a great Disgrace.

Now, such a Moat as this hath all the Conveniences I spoke of, besides serves the House with Water; which,
from

from the Wind and the Sun's free Access to it in a great Body, will certainly preserve it sweet and wholesome. The Sinks of the House will not foul it, as it doth in lesser Quantities, even to kill the Fish, as well as make the Water unfit for Use. The View of it is a Delicacy the greatest Epicures in Gardening court, and we hear of it by the Name of Canal. Then the moving upon it in Boats, either in calm Weather, or with some Wind that stirs the Water, and gives a Power of employing somewhat of Sail, after a Romantick Way; and thus Circling an House, taking the Variety of Walks and Gardens here and there, visiting Stables and Offices, seeing the Horses air upon the Banks, &c. are Pleasures not given to be understood by any, but Statesmen laid aside for their Honesty, who by Experience are taught the Variety of Greatness, and have an Understanding to distinguish the true Felicities of Life.

I know the Objection of Charge, which must be very great in such a Work as this; but I consider the great Profusion of Money that is allow'd to transitory Vanities; such as Habits, Treats, Equipages, not to mention Vices too well known; such as are Helluo's of Money, and depauperate Families, leaving nothing but Diseases to shew for them. If so much, or a much less Proportion being dispos'd to employ Mankind, the Poor especially, in making Holes and filling them again, were much more commendable. What is it then to produce Advantage to your Self and Family, to improve your Habitation and Estate, preserve Health and Reputation?

But even the Charge might be alleviated, if not in great Part sav'd, by good Management. For such gross Works as this may be put out to Undertakers, and you may compute by the solid Foot or Yard, what the Charge will be; and the Masters will see the Men Work, which you cannot do if
you

Of Fish and Fish-Ponds.

35

you are Master, and do all by the Day. Then, every one delights to have rais'd Walks and Terrasses about an House and Garden; so that the Earth being employ'd in such, and raising Mounes in proper Places, will produce a real Equivalent for the Charge: But this is a Digression which here I conclude, and return to the Affair of Fish.

Then considering Moats, as commonly they are, it is not expected, that the Fish should be much at Command, because it is difficult, and perhaps not convenient to lay them dry. However, they should be kept full stock'd, and will maintain a great many. This will mend your Angling, and the fishing with Nets will seldom be Labour in Vain, as certainly it will prove if under-stock'd. These Waters will receive a great Share of your Fry and Stores that are superfluous, and so preserve them.

If a Moat come to be laid dry, as will be necessary sometime to keep it from

from turning all to Mud, after you have by a Sluce or Cut drain'd the Water as low as you can, make Dams with Boards and Clay, and ram them to be Water-tight; so you may toss the Water out of one Division to another, and take out the Fish in good Order; but if you dry all together, you will not be able to secure all; besides, having one Division full of Water, you can relieve the Fry and Eels by letting it upon them; which else, for want of a Fresh to let in upon them, will be lost. So when one Division is fish'd, that is reliev'd by tossing the Water out of the next. And this Course is not amiss, though you intend to throw out the Mud; for the saving the Fish while you are taking them out, quits the Charge of making the Stanks.

CHAP.



C H A P. X.

Of other Auxiliary WATERS.



YOU must have other Waters besides Stews to assist in the Disposition of the Fish; for laying a Pond in that great Order dry, as I propose, once in every Year, there will be a great Quantity of Fish to be dispos'd of; so that you must have a sufficient Quantity of Waters to receive them when you abound, and to recruit when you want. The Stews will carry 60, 70, or 80 *Carps* a piece, supposing you spend continually out of them; so other Waters will receive their Proportion, by sending this way, and that the Stock of

of Fish, you will preserve all, and know where to find them again.

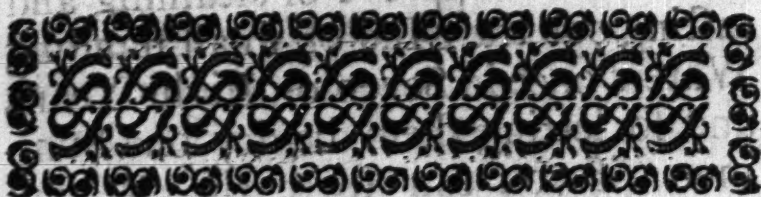
These By-Ponds will be dispers'd about your Estate, where perhaps your Predecessors thought fit to make them, for the convenience of their Pastures, or you may make them as you can best with Respect to Charge and other Advantages, observing always in a Ground to take that Part for your Pond, to which the Waters are most apt to settle. In some Places, but very few, the Waters stand best upon the Hills; and the Valleys, when Sandy, will not hold well. The Nature of the Ground is to be regarded.

Some Ponds of good Depth, of about Five or Six Rod Square, should be assign'd to maintain Pikes, which, when great, ought to be kept by themselves; for in a few Years they will Devour other Fish, and greatly surprize you in the Destruction they will make. But I shall speak more of this when I come to the Stocking of Waters.

I do much approve of cleansing and casting out the Mud of small standing Waters once in Seven or Eight Years, and so letting them lie dry one Summer, if you can spare the Water; which from Moats, and Pasture-Waters, can scarce be done, without great Inconvenience. These Matters Exercise the Invention of a good Oeconomist, who will endeavour to prevent Damage, as well as save time, and turn even his Pleasures to Profit.

One thing I Advertise here, which is, not to let Carps continue in a small standing Water above two Summers and one Winter; for so you run a much less Hazard from Frost, than otherwise you will do; besides, the Fish will grow much more upon Transplanting, than by continuing in the same Water, and more in the great, than in the small Waters: But of these things more afterwards.

CHAP.



C H A P. XI.

*Of the Course of laying the GREAT
WATERS Dry.*



BEFORE I come to the
Business of Fish, I will fi-
nish what I had to say a-
bout Ponds, and the Con-
duct of them; and of
that there only remains to speak of the
Course of laying them Dry.

As for the smaller Waters, I have
touched what concerns them already;
as for the Greater, or principal Ponds,
proceed thus:

In *October*, or after, draw the Sluce
of the First made Pond, and lay it as
Dry as possibly you can. It may be the
Sluce, especially if the Pond be many
Acres,

Acres, will not vent the Water suddenly. That is of no great Import, because, as the Waters fall, you will have Opportunity of Fishing with Nets, and so clear the Fish by Degrees; which left to the last, will be too great a Burden to clear, and will not be done without Damage; besides the hurry will disorder every thing. If the Sluce will not vent all the Water from the Pan, a Labourer or two will soon throw it out with Scuppets. Here you find the Use of the Channels of Diversion, spoke of before; for they will keep off all Land-Waters, if the time should prove Rainy, and so permit the Pond to empty and continue dry, which you could not answer for a Day without them; and therefore they should be made on both Sides of the Waters, on each Hill one: which will defend the Shot of these Hills, that otherwise would retard the Work,

When your Pond is dry, and thus secur'd, keep it so all Summer, and you may make a Profit of the Soil sufficiently,

ficiently, either by Ploughing or Feeding. And at *Michaelmas* next, or a little sooner, let fall the Sluce, and turn in all the Water you can, that the Pond may fill, and at the being near full, it is ready to receive the Stock again.

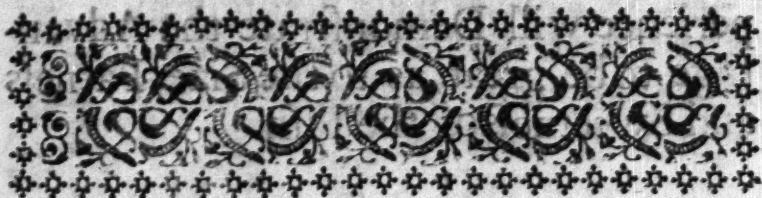
At the same time lay another dry, proceeding as before; which you may do Alternately during your whole Life; Nay, if you have but two great Ponds, this is the best Course, and will turn most to the Profit and Feed of the Fish, as I shall shew when I speak of Feeding.

If your Stock be very great, you may let your Ponds stand full Two or Three Years, but not longer, unless you delight to see starv'd lean Fish; for such will certainly be, unless you keep an Under-stock by three Fourths continuing in the same Water Four or Five Years. And it is a certain Rule, that the oftner Waters are laid dry, the better the Feed of Fish shall be, and more shall

shall be maintain'd. And a little Experience will Demonstrate the Advantage to be great, as to the Size, Fatness and Sweetness of the Fish.

When your Pond is dry, concern not your self to carry out the Mud for the first 14 or 15 Years; and then let it be only out of the Pan whence you took the Earth to raise the Bank, but never break the Turf of the rest of the Ground flow'd: But when it comes to be a Yard thick in mere Mud, it is good to take it out; for tho' Mud be good to improve Ground, yet when it is taken from the Pond, down to the Dead Earth, your Ground and Soil is Depauperated, and the Water by Consequence; which cheats the Fish, that is, your self.

Some have thought, that great
tendency is to be found in the
Clays, some which are more apt to
grow up to a great Size, others to
spread and look broad and flat.
I do not deny
CHAP.



C H A P. XII.

Of the Breeding of FISH.

Having done with Ponds, the Manner of making, preserving, and using them ; I intend next to Discourse of Fish, and how best to dispose them to maintain the Waters in full Stock : But before I come to the Stocking of Waters, I must speak of the Course of Breeding Fish, whereby the Stock is to be recruited and supply'd.

Some have thought, that great Difference is to be found in the Sorts of *Carps*, some whereof are more apt to grow up to a great Size, others to spread and look thick, and others for the Sweetness of Meat. I do not deny
but

but there may be some Difference, but I cannot esteem it so considerable, as to be worth the looking after. Varieties in Nature are infinite, and in the several Breeds of Fish, as of other Creatures: Yet I have not observ'd so much of it in *Carps*, that I could tell how to distinguish them, where I could promise my self better Success with one Sort than another. This is a Nicety which Fishmongers, that make a Trade of Buying and Selling, talk of, intending it only as a Topick of Mystery which all Trades affect, and to have something to say for valuing or undervaluing, as they Sell or Buy, to justify in their Talk the Prices they propose to take or give; therefore this Nicety is left to them.

I do yet believe, that a Sort of Fish, bred in great Numbers in bad Waters over-stock'd, and almost starv'd, may in Process of time degenerate, and both lose a good Shape, and be less apt to grow up to a due Greatness, than others that have been better Descended
of

of a cultivated Stock: And on the other Side, it is no less possible, that by coming into good Quarters, Fish may improve and mend; so that a Gentleman is to expect the Goodness of his Fish from the Cleanness of his Waters, and the Plenty of their Feed, and not from any Choice of his Stock or Breed; and let him get them where he may, if well order'd, he may assure himself they shall answer his Expectations.

It is a Common Observation, that some Waters will, and others will not breed. It is my Experience, that most Waters, the first Year after having lain dry a Summer, do breed, and that numerously, especially *Carps*, which I have known increase to such an incredible Fry, that I have been troubled how to dispose of them, so as to have them again after three or four Years, when they became good Stock for great Waters. *Eels* and *Perch* are of very good Use to keep down the Breed of Fish, for they prey much upon

upon the Spawn and Fry of bred Fish, and will probably destroy the Superfluity of them.

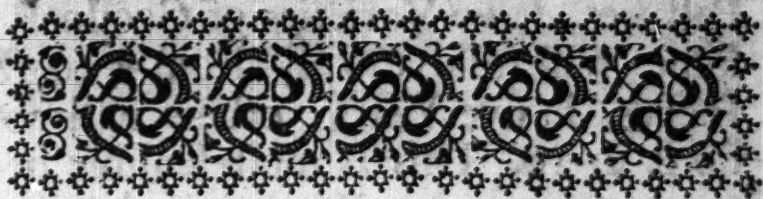
The Quality of Breeding, is scarce to be found out by any certain Symptom ; for some very promising Ponds do not prove useful that Way. The best Indication I know of a breeding Pond, is, when there is good Store of Rush and Grazing about it and gravelly Shoals, such as Horse-Ponds usually have. When a Water takes thus to breeding, with a few Milters and Spawners, two or three of each, you may stock a Country.

As for *Pike, Perch, Tench, Roach*, &c. they are observ'd to breed in almost any Waters, and very numerously, only *Eels* never breed in perfect standing Waters, and without Springs; and in such are neither found, nor increase, but by putting in ; but where Springs are, they are never wanting, tho' not put in : And which is most strange of all, no person ever saw in an
Eel

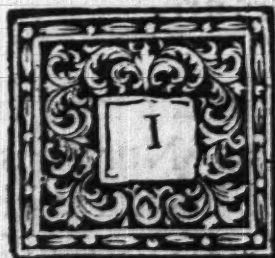
Eel the least Token of Propagation,
 either by Melt or Spawn in them; so
 that whether they breed at all, and
 how they are produc'd, are Questions
 equally Mysterious.



CHAP.



C H A P. XIII.

Of the Manner of Stocking W A T E R S.

I Have found a great Analogy between the stocking Waters with Fish, and Pastures with Cattle ; and that the same Conduct and Discretion belongs to both. Waters may be over-stock'd, as Pastures often are ; so both may be under-stock'd. The latter is the less Error ; for if you over-stock, you lose the whole Summer's Feed ; if you under-stock, you lose only the rest of your Profit ; what you do Feed, is much the better, and turns to Account by more ready Sale. So also of Beasts, some of the same Age and Feeding, will not thrive so well as others. I have found the like in my
D Fish.

Fish. And Waters themselves, like Pastures, have Varieties of Goodness; some will raise *Carps*, from 5 to 18 Inches, in five Years; others will not do it in 10. This is most sensible between your great Waters made upon a Fall, and the small standing Waters, which have more Inconveniencies, and are liable to Frosts, and other Casualties, more than the others are.

Therefore I propose, that the smaller Waters should be us'd as Nurseries, and either to breed, or be stock'd with the bred Fry of other Waters, to raise them to a Fitness for Stores in your Principal Feed; that is, to Six or Eight Inches. And of these bred Fry, you may put a 100 into Four Rod square of Water, or near that Proportion, and fail not to remove them in two Years time; and so you will have good Recruits of Stores for your greater Waters.

And thus the many Thousands of bred Fish that you will have upon the draining

draining your great Waters, which many are apt to slight, may be sent several ways to the Waters about that and your Neighbour's Grounds, and there fed up like Chickens, and in time turn to great Profit, as I shall shew; therefore they ought not to be slighted, but carefully to be preserv'd; the rather, because considering a Pond (as I propose) will, tho' but four Acres, feed up 1600 *Carp*s in two, and perhaps in one Year, from 10 to 18 Inches, fit for your Table, Presents, or Sale. How is it possible you should re-stock your Waters the Winter after, without this Providential Fore-cast, whereby you have Magazines of Fish in other Ponds, fit Stores to supply your Occasion?

Now, as for your Great and Principal Waters, it is hard to Assign a certain Proportion for the Stock; but pursuing the Methods I propose, you will soon come to the Knowledge what Stock the Waters will carry; for laying a Pond dry every Year, you will see the Fish well fed, or else thin and lean;

and accordingly you judge whether the Stock was too little or too much for the Water. Thus by the Thickness or Fatness of Cattle, you judge if your Ground will carry more or not; and both as to Species and Number of Fish, Experience must be your Guide in the stocking of Waters.

However, to save Loss of Time, which you must sustain by making your own Experience, I will give the best Directions I can for the first Entry upon your Business, and not leave the Matter wholly in the Dark.

If the Pond be supply'd with a white fat Water upon great Rains, you may put into it at first 300 *Carps* per Acre, in Case there be Three or Four Acres, else not so many. And it will be expedient to put in 40 or 50 *Tenches* for a Tryal, because this Sort of Water is most proper for *Carp*; but being lay'd dry, sometimes may prove well for *Tenches* also, which when thriven,

thriven, are a very good Fish ; but this Proof Tryal must Determine.

You may add *Perches* to any Number, and not hurt the Water ; I propose 600 ; for tho' they are great Breeders, being also Fishes of Prey, they devour their own Species as much, if not more than any other ; and by destroying the Fry of bred Fish, they preserve the Food for the Maintenance of their Feeders, which the Fry would intercept ; so do Good rather than Harm. I took once out of a *Perch's* Belly of 10 Inches, 10 other *Perches*. This is esteem'd one of the best Sorts of fresh-Water Fish, and therefore deservedly to be encourag'd.

Have a great Care of putting *Bream* in these Sort of Waters ; for they will grow up very slowly, tho' at last they will be great ; but in the mean time they breed so infinitely, and such a slimy nasty Fry, as both robs and fouls the Water, making it unfit for the other Fish. But when a Water is 10

or 12 Acres, and fed with some Brook, Winter and Summer, they will do very well ; otherwise not to be made use of,

As for *Pike*, which are inferior to no Fresh-Water Fish, and now more esteem'd than ever, being less plentiful upon draining the Fens, and so charm more ; they are dangerous Guests in the great Waters ; for if grown large, they will devour and destroy the best Fish, and Depopulate the Water. But thus far you may trust them ; if you can procure 100 *Jacks* once in two Years, not exceeding nine Inches, you may put them with the *Carps* into your great Waters, so as your *Carps* are not under Nine or Ten Inches ; but take care that they stay not above two Years, and then send them to their peculiar Ponds, and feed them as I shall hereafter Discourse, and so they will grow to be very large and fine Fish, which you would not want.

I cannot advise the stocking great standing Waters with *Eels*, for they grow slow, and being of an indifferent Size, will be lean and dry; but in Moats which have the Sinks of an House-drain into it, is proper enough for them, and they will thrive in it. It is a Sort of Fish, as I noted, that belongs to a Springy Water.

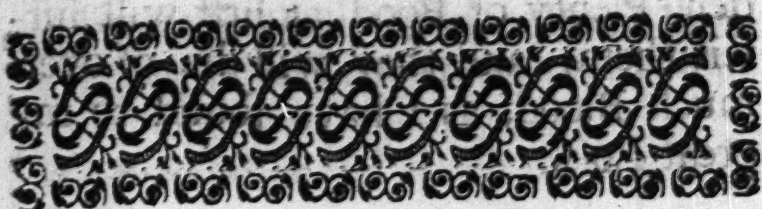
These Directions belong to the first stocking of new-made Ponds, which as to feeding, lye under a Disadvantage; the Reason I have touch'd, and is from the Dead Earth in the Pan from whence you rais'd the Bank, and that at first, which is about an-Acre, is almost unprofitable. But afterwards, when that dead Ground hath contracted a little new Soil from the settling of the Water, especially after Land Floods, and lain dry a Summer, whereby it will begin to graze, it will become like the rest of the Pond, and put forth as good Feed for Fish as any other Part. This may seem strange and new, but is a great Truth, known to me from indubitable Experience.

Then after one, two or three Years, (for longer the Pond must not stand full) when you come to re-stock, and so on in all like Occasions, you may put 400 *Carp*, or 300 *Carp*, and 800 *Tench*, (if the Water feeds them) into an Acre, besides *Perches*. It is incredible to those who have not seen it as I have done, how *Carps* thus order'd, by Transplanting them every Year or two, will grow. I affirm, that from six, they will grow to twelve and better, the first, and to Fifteen or Sixteen the next Year; and then they are most fit for a Gentleman's Table ordinarily; for tho' greater are more Ostentatious, yet these are the most sweet and best Meat, as young Flesh is commonly preferr'd to old.

It is to be noted, that if the Fish wherewith you stock the Waters, were kept so close together, and come from over-stock'd Waters, which renders them lean and poor, you must double the Stock at first, else the too sudden

den Plenty of Food at first will sur-
feit them, and they will die of over-
much Blood, as I have found to my
great Loss.





C H A P. XIV.

Of the Manner of Feeding FISH.

I N a Stew you may keep up 30 or 40 *Carp*s, from *October* to *March* in Winter, without feeding; and by fishing with *Tramels* or *Flews* in *March* or *April*, you may take from your great Waters, to recruit the Stews; but you must not fail to feed all Summer, from *March* to *October* again, as constantly as your coop'd *Chickens* are fed, and to as good and certain Account. The Reason you feed in Summer, and not in Winter, is, because the Fish will lie close in cold Weather, and feed little, not caring
to

to stir, especially upon the Shoals, where it is proper to give them Meat.

If you would bring more Fish together into your Stews, you may preserve and improve them by feeding; but there are Bounds, because the Water is but small, and will not admit any great Number: But if you have a great Number of Fish to be kept for an Opportunity, and you put them into a considerable Water, you may in that Manner stock to any Quantity, taking Care duly to feed them; and so not only maintain, but improve one 1000 *per* Acre; but if thus over-stock'd, and you do not feed sufficiently, they will sink, and you be a great Loser.

Now, as for your Stews, the Care of feeding is best intrusted to a Butler or Gardener, who are or should be always at Home, because the constancy and Regularity of serving the Fish, conduces very much to their well Eating and thriving; for they will expect their Meat as duly as Horses, and Appetite

petite in any Creature, wafts by Disappointment.

Any Sort of Grain boil'd, is good to feed with, especially Malt course ground. Pease boil'd a Turn or two, are as good as any other Grain. The Grains after a Brewing, while they are good and sweet, are very proper; but one Bushel of Malt not brew'd, will go as far as two of Grains. The Chippings of Bread, and Orts of a Table, steep'd in Tap-droppings of good strong Beer or Ale, are very good Food for *Carps*. Of these the Quantity of two Quarts to 30 Table *Carps* every Day, is sufficient; and to feed Morning and Evening is better than once a Day only.

The Place to feed, is towards the Mouth, at about half Yard deep; for that keeps the Deep clean and fit, as a Parlour, to retire to, and rest in. The Meat plainly thrown into the Water, without other Device, will be pick'd up by them, and nothing shall be lost.
However,

However, there are several Ways to give them Meat, especially Pease, which are useful; as a square Board let down, with the Meat upon it, by the four Corners, whence a String comes, and made fast to the End of a Stick like a Scale, is very manageable. A Gentleman had found out a very easy Way to feed *Carps*, worth Noting, because I have heard it was successful. He let down the very Kettle in which the Pease were boil'd, into the Water, and the Fish would come and take out every Grain.

When you feed in the greater Waters, where the Numbers are also great, it will be a Charge, as well as Trouble; but when you take out the Fish, and see how they are thriven, you will allow both well employ'd. Either Malt boil'd, or fresh Grains, is the best Food in this Case : And what is not supply'd from your own House and Brewings, you may take of Neighbour Ale-houses, who will be willing, for a small Matter, to throw into the Water, at
a

a Place you shall assign, a certain Quantity every Brewing. Thus *Carps* may be fed and rais'd like *Capons*. And *Tenches* will feed in Stews, as well as *Carps*; but *Perch*, as was said, is not for a Stew in Feeding-Time.

There is a Sort of Food for Fish, which I may call accidental, and is no less improving, than the best you can contrive; and that is, when the Waters happen to receive the Wash of Commons where many Sheep are fed, the Water is enrich'd by the Earth, and shall feed many more *Carps*, than otherwise it would. This is the Case at *Antlingham* in *Norfolk*, where there are Ponds in a Common that raise *Carps* wonderfully, altho' the Soil be sandy and poor, and the Waters seldom let out; and this earthy Wash is the Reason of it. When Cattel are fed upon the Pastures by your great Waters, if they have Access to them, in hot Weather they will take Delight to stand in the Water; the Dung that falls

falls from them, is also a very great Nourishment to Fish.

It is believ'd, that about *London* the Fish-mongers have Ways of making *Carps* by the Offal of Butchers Shops and Slaughter-houses; which I do not at all recommend to others, if that were to be done, because a sudden filthy Feeding can neither be wholesome nor sweet. But I have not observ'd, that *Carps* do in any Sort delight in Blood, nor indeed any other Fish, except *Breams*; and those will feed much upon new Grains mix'd with Blood; so that if you will be at the Charge of feeding them in Stews, like *Carps*, you may have large *Breams* in six or seven Years, which are a very slow Grower, unless it be in springy Waters.

One Way of feeding Fish, is worth remembring, tho' not fit to be us'd in Waters that you ever look upon. It is laying a dead Carrion upon Stakes in the Middle of the Water, and it will breed Maggots, which falling into the Water,

Water, feed the Fish very considerably; but I have not prov'd it.

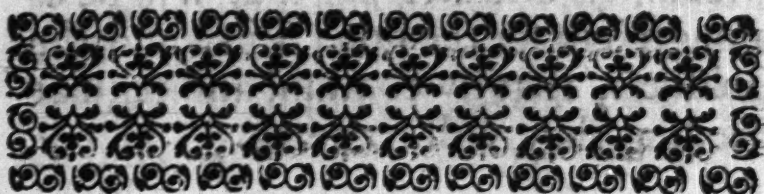
As for *Pikes*, the best Food to raise them up to an extraordinary Fatness, is *Eels*; and without them it is not to be done, but in a long Time; otherwise small *Perches* are the best Meat you can give them. And the common Opinion, that *Pikes* will not eat *Perches*, because of their arm'd Backs, is a great Mistake, as I have found by certain Experience. *Breams* put into a *Pike-Pond*, will breed exceedingly, and are good enough to maintain *Pikes*, who will take Care they shall not increase over-much. And the great Fry of *Roaches* and *Rounds* that come from the greater Waters, remov'd into the Quarters of your *Pikes*, will be good Diet for them.

Pikes in all Waters, and *Carps* in hungry springy Waters, being fed at certain Times, will come up and take their Meat almost from your Hand; and it is diverting enough to see the Greediness

Greediness and striving that will be amongst 'em for the good Bits, and the Boldness, that by constant and regular Feeding they will come to.



CHAP.



C H A P. XV.

Of disposing the Increase of FISH.



HIS Care presseth when you empty your great Waters; and unless you have projected beforehand how you shall dispose your Fish, you will find your self in great Disorder.

As for *Carps* for the Service of your House, and also *Tenches* and *Perch* for Winter, they are to be dispos'd into your Stews. The rest of your Fish, except the Fry, you may put into the great Water, and in *March* or *April* after, with Flews or Trámel, take out good Quantities to recruit your Winter's Expence taken from your Stews; the Fry goes to your *Pikes*,
except

except *Carps*, *Tench* and *Perch*, which may go to some of your auxiliary Waters to be rais'd, in order to become Stores again when you want. And if, after all, you find your Stock too high, you must feed as I have already discours'd.

But you may contrive to keep your Stock within Compass; for you may enlarge the Expence in your House, and gratify your Family and Friends that visit you, with a Dish as acceptable as any you can purchase for Money; or you may oblige your Friends and Neighbours, by making Presents of them, which, from the Countryman to the King, is well taken; for many that have Waters, not being in a Method of husbanding them, as well as others that have none, want and desire Fish, and look upon such a Present, as of a Rarity, valuing it not by your Plenty, but their own Scarcity. And where Fish is plenty, it is a positive Disgrace to appear covetous of them, rather more than of Venison, or
any

any other Thing; so that Presents are not only expedient, but necessary to be made by him that professeth a Mastery of Fish.

Another Way, more prudent, tho' in the Account of shallow People, less reputable, is that of Selling. If there were any Colour for Disreputation in that Matter, I should bestow some Words upon it; but seeing it resides only among vain Women, or Women-like Men, I let the Humour pass, and should as soon preach against the Opinion of *Fairies* and *Robin-good-fellow*, as that. Only by the Way I presume to advise the censorious Sparks to do nothing unjust; let their Dealing be plain, tho' in selling of Horses, spend what is their own, provide for their Families, and be true to their Friend; and after this, whether they sell Corn, Cattel, Conies, Sheep, Deer, Horses, or Fish, I will insure their Honour for a Farthing. It is the Truth and Substance of Things, and no Persons Opinions that governs Honour, which consists

fishs wholly in doing what is truly just and good, and nothing otherwise.

This Matter being dismiss'd, I proceed to direct the Course to be taken when you propose to sell. First, contract with the Person you deal with, for a Quantity; which, if for Sale to Eat, will be by the Measure of so much *per* Inch, for every Inch above a Foot; if for Stores, then so much *per* 100, or Dozen, between certain Lengths; as between 9 and 12, and 7 and 10 Inches, to be deliver'd alive where is agreed.

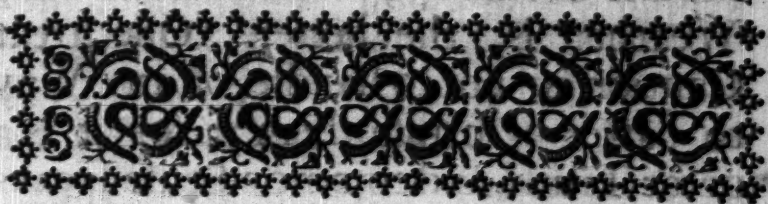
This Trade will be easy, if you are planted within 40 Miles of *London*, which will take off Quantities for Retailing, else it will be hard to find Contractors; but for Stores, there will be some always beginning in Fish, with whom you may deal; and so few will sedulously apply to the Conduct of their Waters, as is necessary to a Command of Fish, you need not fear the Country will be over-stock'd. If the Humour of living in the Country once repossesseth

possesseth the Gentlemen, there may be much more Occasion for Stores, than at present there is, because their Seats are let to Tenants, and the Waters uncultivated.

When you have contracted, you are at a Certainty, and may proceed; for it is a great Inconvenience to take and carry Fish, and then be paid with a Wrangle; therefore let your Terms be certain, and you can have no Dispute, because all is to be declar'd by Measure.

You will find your Stews and auxiliary Waters of great Use to you upon such Occasions; for you clap in what Fish you please for fourteen or fifteen Days; for Instance, 5 or 600 Carps to a Brace of Stews, and they take no Harm. If they continue longer, it is but feeding them until they are fetch'd or carry'd away.

CHAP.



C H A P. XVI.

Of Fishing for CARRIAGE.

AS for the particular Ways and Methods of taking Fish, such as I have dealt in, is at present besides my Design, tho' I may not perhaps altogether pass it by: So much as concerns the Carriage of Fish, which I look upon as a considerable *Item* in the Managery as to Profit, which I principally in these Remarks aim at, I shall now observe.

When your Fishing is in Order to remove far, whether the Waters are great or small, it must be done in Winter, between the first of *October*, and the

the last of *March*; and the colder the Weather is, the better. One great Caution is, not to handle, or any Way to batter or bruise them; for it is a great Truth, and common Sense speaks it, that Fish batter'd and bruis'd, will not thrive upon transplanting, so well as others; therefore when your Pond is drawn, and you come to the Fish, take them out of the Water with Hoop-Nets fix'd upon Staves about 10 Foot long, and 10 or 12 Fish at a Time in a Net is sufficient, tho' but a Foot long; more by their Weight and Struggling, will damage each other insensibly, so as to hinder their Growth and Thrift, and perhaps be the Cause that many die. Let the Fish be as little out of the Water as may be; for when foul'd, and almost choak'd with Mud, they will clean and recover themselves with Water, which freshen upon them often, till you come to put them up for Carriage.

. If you fish with Nets, and make a great Draught, as probably you will
when

when the Water is low, be not hasty to draw the Fish upon the Ground, but secure them by taking the Lead-Line upon the Ground, and holding up the Cork-Line, and so let them stir a little, they will be the cleaner; and then take them out with Hoop-Nets, as before. And if there be Occasion to keep them any Time out of the Water, let it be upon the Grass, when there is no Sun, or else in the Shade, for Heat is the greatest Enemy to the Life of Fish out of Water, that can be.

The best Vessel for Conveyance, (if you carry above 20 Miles) is, a great Tun that holds five Hogsheads; but if no more than 10, 15, or 20 Miles, ordinary Hogsheads will do well enough. I know by Experience you may safely carry 300 *Carps*, six and seven Inches long, in one Hogshead; but from seven to a Foot, not so many by a fourth Part. If they exceed a Foot, then not above 70 or 80 in a Hogshead. Let every Hogshead have 10 or 12 Pails of fresh

E clean

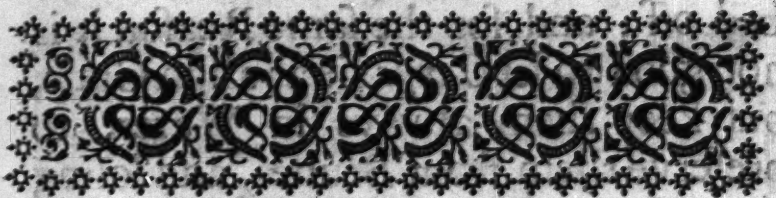
clean Water, (not Well-Water) every six or seven Miles, if it may be had. There is no need of any great Liberty for the Fish, if their Water be fresh, and often renew'd; for one great Use of the Water, is to buoy the Fish, that with mere Weight they might not crush and destroy one another.

When you are arriv'd at the Place of Discharge, pour the Fish into an Hoop-Net a few at a Time, and dispose them forthwith where they are design'd; and with this Care you will scarce lose a Fish.

Some use to put up Fish in Baskets or Hampers for Carriage, stowing them with Grass between; but this is not so good as Water, for the Grass cleaving to the Slime of the Fish, rubs and cleans it from the Scales; which done, a *Carp* scarce ever thrives after. And altho' perhaps the Fish may live, they will not grow or thrive, because their natural Slime, scarce recoverable, is rubbed

bed off; and for the same Reason it is not good to let *Carps* lie at all in Grass, but keep them always in Water, to preserve them from Bruises, and losing their Slime.





C H A P. XVII.

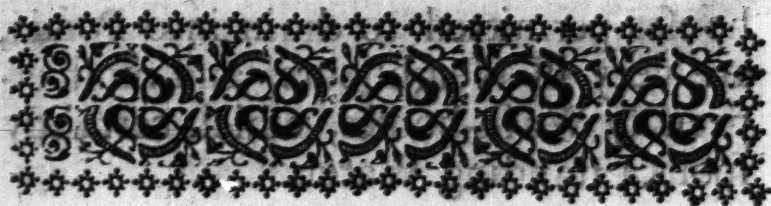
Of Nufances to PONDS and FISH.



Generally speaking, the fresher Air and cleaner Soil your Water hath, the better Fish thrive. Wood of any Sort near the Water, is bad, not only from it's hindering the Wind and Sun from purifying the Water, but from the Leaves falling in, and rotten Wood; both which are pernicious to Fish. But Oziers and Willows may be allow'd of, without much Inconvenience. Oak-Boards or Timber laid in Water, as sometimes is done to season, will in all probability destroy all your Fish, and likewise Hemp laid to rot; all which are therefore to be avoided. Dung-hills, Stables, or Cow-houses

houses permitted to drain into Ponds,
are very ill Neighbours, and most es-
pecially Wash-houses, which certainly
spoils a standing Water.





C H A P. XVIII.

*Of FROSTS, and the Ways to save
the FISH in them.*



THE great Plague and Bane of Fish in Moats, great and small, and other little standing Waters, are great and sharp Frosts. I have us'd all the Tricks that I have heard of, which are not a few, or could devise, to save my Fish in such Waters ; and yet in Ten Years time I have lost Three or Four Thousand *Carps*. But yet I have found Ways to save the Lives of many a fair *Carp*, when my Neighbours have lost all ; which I shall declare as my own Experience, and may be profitable upon like occasions to any that will use them.

First,

First, As to the Sorts of Fish that suffer most, I can only say, that the *Tench*, if any, is Frost-Proof, and will shift in Extremity; but if the Frost be intense and long, the other Sorts, as *Carp*s, *Eels*, *Pike*, *Perch*, and *Roach*, will go near to Perish; and I have found not any great Difference of Hardiness, but when one Fish complains, they are all in imminent Danger.

The Waters most obnoxious to Frosts, are such as are standing, shallow, or small. For if there be either a Water-Current, or a fresh Spring, no Fish dies for Frost. If an hard Winter succeeds a very dry Summer, the Fish suffers most. If the Ponds are large and deep, such as I have directed to be made upon the Channel of Water, which may not run but upon Floods or Rain, the Fish will never die in Frost there; but such Waters you must look upon as the Asylum for the securing the Fish in Extremity; and all that you can put in there alive, tho' thro' a Hole in the Ice, will certainly live.

If the Bank of a Pond sews, it will preserve the Fish in Frost; the Reason, as I imagine, is, because where the Water sews out, the Air will bubble in, which relieves the Fish; or perhaps it might put the Water into some Degree of Motion. If so, the stirring Water with a Board flat upon a Pole put under the Ice, might do Good; but this is Conjecture.

The Symptom of Mortality to your Fish in time of Frost, is, their shewing themselves; which if you perceive in the least, conclude all are going; and without a Thaw, that Water will not keep them alive. For it is the Nature of Fish in cold Weather, to lie as close and deep as they can; so that nothing but the Pangs of Death shall make them move. If no Holes are broke, they will rise and stick to the Ice, and be frozen to it; if there be Holes, they will move about them, as if they came up for fresh Air.

When

When the Frost hath continu'd long and hard, that you begin to suspect your Fish, you may make a Tryal by cutting Holes in several Places, some in the Middle, and some by the Sides of Waters that are obnoxious; that is, after about Ten Days freezing, and by the appearing of the Fish, or not, you shall discover the Temper and Condition they are in; therefore watch them diligently. If they are not well, they will appear; then prepare all Hands to take out every Fish, as near as you can; for what you take out, you may preserve, and all that are left behind, are probably lost.

Many use to break Holes to relieve the Fish, and as they think, give them fresh Air; some have put Dung bound up together into the Holes, as if the warmth of that keeping the Hole open, would preserve the Fish; but these Ways, and all others that I have heard of, except taking out the Fish, are mere Vanities. I have cut many Holes, and large ones, and employ'd

Men to take out the Ice, and keep them open, but to no Advantage. One thing appeared very oddly to me, when I took that Course. Many of the Fish in a large Moat had gather'd together in a Corner obverted to the *South*, where the Ground rose under an high Bank, to a Shoal-Water. These Fish, by their Motion and Heat, together with the Sun's Heat, that was strongest there, kept the Water from freezing, and I could plainly see every Fish, great and small. There were *Carp, Pike, Perch, Eels*, and Fry in abundance, collected as if it had been a general Council of all the Orders of Fish, met to consider what was to be done in that Extremity, very diverting to observe.

But to leave Conceits, and come to the only Expedient which I have found effectual to save the Fish in this Case; and that is, to set great Tubs or Fats full of Water in some Out-House, not far from a Fire; and as fast as the Fish appear, take 'em out, and put them there

there; and from thence you may convey them in a Basket to your great Waters, where you may make an Hole at about 8 Foot deep, and putting the Fish in, preserve them; or if you please you may keep them there, freshening the Water every twelve Hours, 'till the Frost breaks, and put them into their own Houses again. You may plainly perceive how the Fish, tho' stunn'd and numb with the Frost, coming into the Fat, will by Degrees recover, and be perfectly well again; and thus you may keep them five Weeks, or longer, if the Frost continues.

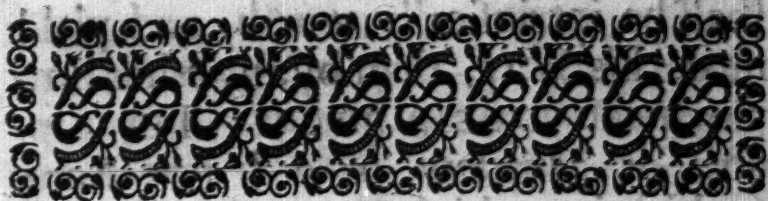
I have gone farther: Sometimes Fish have been to all Appearance dead, others frozen and invelopt in Ice, yet by this Method I have preserv'd them; for heating Water, and putting it into the Fat, 'till I brought the Water there to a *Midsummer*-Heat, and then I have put such Fish in, with their Shell of Ice upon them, and in Six or Seven Hours the Ice was gone, and the Fish alive and well; and so I have delivered

red them to my greater Waters, brisk as any.

This may seem strange, but it is most true, and to be attested, if need were; therefore in Frost use this and no other Means, for all else will prove but Labour in Vain.

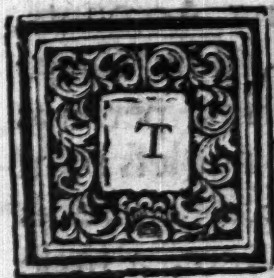
In small Waters, where is the greatest Danger of Frost, observe never to put in Stock, but the last Week of *February*, or beginning of *March*; for then they take less Hurt in removing and they may be taken out in *October* after, and so all Hazard of Frost prevented; and if you venture them there one Winter, be sure never let them run the Hazard of another: So you have two Summers Feed, which will raise a *Carp* from Store to the Table, and venture but one Winter's Frost; and in Winter they neither feed nor grow any thing considerable.

CHAP.



C H A P. XIX.

Of the ordinary Benefits and Improvements by FISH.



THESE were touch'd when I spoke of disposing the Increase of Fish; that is, furnishing your Table, obliging your Friends, and raising Money. I shall only add to the last, that it is most reasonable, if it can be contriv'd, that Pleasures pay for the Charge of them. Then what is more justifiable, than to make Ponds yield a Profit to answer the great Charge in making them?

But we must go farther; Ground shall be vastly improv'd by Fish, and shall

shall be intrinsically worth, and yield more this Way, than by any other Employment you can give it: For suppose it Meadow of 2 *l.* per Acre, (which is an high Value for the best Meadow far from *London*) I will justify, that four Acres in Pond, shall return you every Year a Thousand Carps fed up, to 14 or 15 Inches, besides Pikes, Perch and Tench, and other Fry, useful on many Accounts, if the Water suits them. The Carps are saleable, and will bring perhaps 12*d.* but in all Likelihood not less than 9*d.* yet let it be 6*d.* apiece, there is 25*l.* which is 6*l.* 5*s.* per Acre, a little Charge of Carriage perhaps to be deducted. This is Improvement enough.

But lay aside Profit, and consider how a Gentleman should entertain himself and his Family, which I must suppose every one hath, who lives upon an Estate, and it may be numerous; he must find some Sort of Diversion for them. Must it be altogether going abroad

broad to make, or at Home receiving Visits? Or if the Female Part are so grave, to decline that Course of Life, must they be always within? Or if they stir out, have nothing but mere Air to invite them? Perhaps the Gentleman himself may find Diversion by Hunting, &c. and meeting Company upon several diverting Accounts; and shall all his Entertainments be exclusive of his Family? No, certainly whoever aims at an easy and satisfactory Course of Life, must seek that his Family, as well as himself, be pleased: And if he doth not order it so, that they shall be entertain'd, 'tis Ten to One they will find such Entertainments as shall not be very grateful to him; therefore there is Advantage enough in the Mastery of Fish, from the Diversion, not to speak of the Employment that it brings to a Family. Young People love Angling extremely; then there is a Boat, which gives Pleasure enough in Summer, frequent Fishing with Nets, the very making of Nets, seeing the Waters,
much

much Discourse of them, and the Fish, especially upon your great Sweeps, and the strange Surprizes that will happen in Numbers and Bigness, with many other incident Entertainments, are the Result of Waters, and direct the Minds of a Numerous Family to terminate in something not inconvenient, and it may be divert them from worse. Cards, Bowling-Greens, and Billiard-Tables, are of the same Design; but it will be easily granted, this of Fish is beyond 'em all,

If it be said, that this is not a Pleasure, it is all Care and Pains, especially to him that is the Master, who must be perpetually vex'd at the Negligence and Blockishness of Servants, that will never perform what he expects and orders: I answer, that is a good Reason for leaving the World. The Plague of Servants, is the same in all Business, wherein you use and depend upon them; therefore to be rid of it, give away your Estate, retire, and be an Hermit: And even then

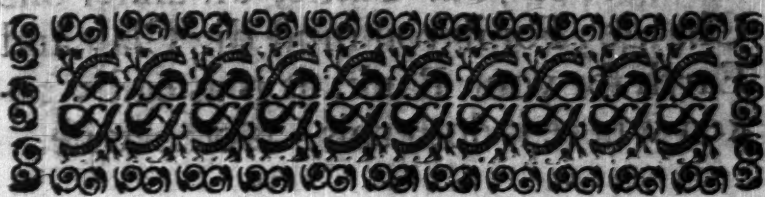
then you shall find, the gnawing of your own Mind, a more perverse Evil, than all the Business, Servants, with the Crosses and Vexations attending them. We were not made perfect, but must live in perpetual Disease; the only Point is, which Way to lessen it; and that must be by Employment, which diverts the Sense of our innate Misery. What can be a greater Torture, than to live chain'd to a Bed, tho' the best in the World, and have no Company nor Business? Therefore court Business, if you would pass for an *Epicurean*, and let it be such as brings Comfort to Nature, and not Pain and Torment in the Consequence; that is to say, Lawful, Profitable, Obliging and Temperate. So you avoid offending the Publick, increase your Store, win your Friends and Family, and preserve your Health; all which, I take it, are accomplish'd, in great Measure, by the Mastery of Fish.

Now,

Now, as to the Vending of Fish, observe, that it is best to be content with the Market-Price, as you can find it, as most are for other vendable Commodities ; and for *Carps* between 13 or 14, and 16 Inches, measuring from Nose-End, to Tail-End, 12*d.* is a good Price ; selling to the Nobility or Gentry, may produce 1*d.* more, and may Measure up to 17 ; but never promise above 20 turn'd of 16 in 12 Score.



CHAP,



C H A P. XX.

Of Benefits, besides the main Design.



THESE are many, and not inconsiderable: As first, When you make a great Water, you take the first Spit of the Ground upon which the Bank is to stand, and from the Pan of the Pond. In Case you take Earth there for the Bank, and this you carry to some Place where it is most easily remov'd upon your Tillage-Ground, and there let it lie to rot the Sodd, and then there is not a better Manure, and more than pays the Charge of digging and carrying it.

2. You gain the making of Stews, and it may be other Ponds for the Convenience

venience of your Cattle, all under one Charge; For if you must dig Clay and Earth for your Bank, it is as easily taken where it doth this, as otherwise.

3. If the Soil about the Waters be any thing Moorish, it may be planted with Oziers, which yield a certain yearly Crop.

4. The Feed of the Pond when laid dry, or the Corn, that is, Oats, which you may have upon the Bottom, tho' mere Mud, is very considerable. This hath been touch'd before.

5. You will invite all Manner of Help to your Fishing, by the Fry given among those who assist you; and tho' you pay 'em, they will expect Fish; and with Expectations of carrying Home a Dish of fresh Fish, Men will work in Wet and Dirt, to a Wonder, without other Pay.

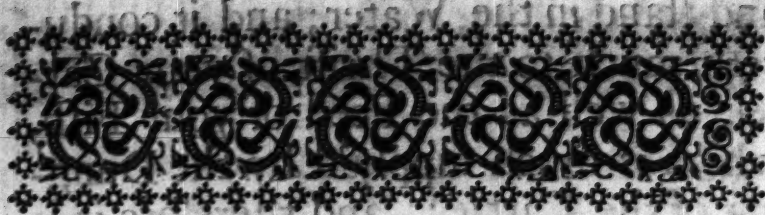
6. If you graze Cattle near your great Waters, they will delight to come
and

and stand in the Water; and it conduceth much to the Thrift of your Cattel, as well as the Feed of your Fish, which is much supply'd by the Dunging of the Cattle; and therefore it is good to have Ponds in Cow-Pastures and Grazing-Grounds.

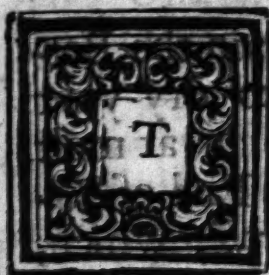
As to the sowing of Oats in the Bottom of a Pond, observe to dry your great Water once in three, or at most four Years, and that at the End of January, or beginning of March; which, if not a very unseasonable Year, will be Time enough. After Michaelmas following, you may put in a very great Stock; and thin them in following Years, as the Feed will decline.



THE

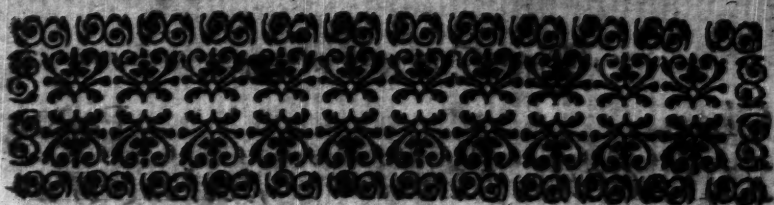


The CONCLUSION



THUS I have given, as Short and intelligibly as conveniently I could, the best of my Knowledge, contracted by 20 Years Practice and Experience, of Fish and Waters: And if I am so happy thereby, to contribute in the least to the Satisfaction or Diversion of my Friends, it will extremely content, if not encourage me to add somewhat farther concerning the Nature of the several Sorts of Fish I deal in, the Ways of taking them, of Nets, Angling, Engines for clearing Waters, and other Particularities that I have prov'd. In the mean Time, they may command these as my self, both being alike open, considerable, and at their Service.

T H E



THE

CONTENTS.

Chap.	Page.
I. <i>Of the Situation and Disposition of the Chief Ponds,</i>	1
II. <i>Of the Manner of Making and Raising Pond-Heads,</i>	5
III. <i>Of the Dimensions of Pond-Heads,</i>	8
IV. <i>Of securing the Banks,</i>	11
V. <i>Of SLUCES,</i>	15
VI. <i>Of the Manner of Working to raise a Pond Head,</i>	17
VII. <i>Of Auxiliary Waters,</i>	24
VIII. <i>of STEWS,</i>	26
IX. <i>Of MOATS,</i>	29
X. <i>Of other Auxiliary Waters,</i>	37
XI. <i>Of the Course of laying the Great Waters Dry,</i>	40
XII. <i>Of the Breeding of Fish.</i>	44
	Chap.

The CONTENTS.

Chap.		Page
XIII.	<i>Of the Manner of stocking Waters,</i>	49
XIV.	<i>Of the Manner of Feeding Fish,</i>	58
XV.	<i>Of Disposing the Increase of Fish,</i>	66
XVI.	<i>Of Fishing for Carriage,</i>	71
XVII.	<i>Of Nusances to Ponds and Fish,</i>	76
XVIII.	<i>Of Frosts, and the Remedies,</i>	78
XIX.	<i>Of the ordinary Benefits and Improvements by Fish,</i>	85
XX.	<i>Of Benefits besides the main Design,</i>	91
	<i>The Conclusion,</i>	94



